For proceedings of the joint Harvard-MIT symposium
on network royalty publishing.

Pubroy d7

page 1
93 . 9 . 14

A PUBLISHING AND ROYALTY MODEL FOR NETWORKED DOCUMENTS

Theodor Holm Nelson, Project Xanadu
3020 Bridgeway #295, Sausalito CA 94965

For some years the Xanadu* project has been planning a royalty publishing service for networked documents (**1**). The proposed system has a number of aspects, some of which are subtle.

It consists of a system of roles, a publishing arrangement, a royalty arrangement and a system of contracts.

The roles.

"Publication" under most systems of law means making a document public. A **publisher**, then, is whoever, or whatever entity, commits the act of publishing. The role of publisher corresponds to the paper publisher: that person or entity which takes the initiative of publication, receives the profits and is sued for the contents.

(The role of **author** may or may not be different from the publisher; but his or her presence is not formally acknowledged within the contractual system; it is assumed that the publisher has made appropriate arrangements with the author, and it is up to the publisher to pay the author in whatever way they have agreed.)

The role of **service provider** is like that of **printer** and **distributor** in the paper world. The publisher contracts with the service provider for the

---

* "Xanadu" is a service and trade mark for services and software of Project Xanadu.

For proceedings of the joint Harvard-MIT symposium
on network royalty publishing.

Pubroy d7
page 2
93 . 9 . 14

material to be reproduced and distributed, just as the publisher now does in the paper world.

The role of **customer** is like that of "customer" in the ordinary paper world. But in the paper world, granularity is large: magazines, books and newspapers are the units of sale. In our model, the unit of sale can be as small as one byte.

Note, of course, that these roles may overlap. In the network community we anticipate, a customer will often be both author and publisher as well.

The publishing arrangement.

Publishing consists of network storage and delivery of documents, voluntarily and explicitly put on line by publishers, and delivery by such fragments as customers request. Nothing is sent but what the reader asks for. The customer pays on a per-byte basis for all published materials sent by the server.

The royalty arrangement.

The publisher sets the price-per-byte of the document, or of its sections, if they differ. The customer sends for arbitrary portions (up to the whole document), paying the royalty for each byte transmitted. (Note that other royalty arrangements have been mooted during the life of the Xanadu project.)

The contracts.

Contract between publisher and service provider. The publisher contracts with the service provider for the storage of the document and its sale by arbitrarily small fragment. The service provider promises to send these fragments to customers on demand and to remand to the publisher the royalties for each sent byte. The service provider also agrees to

For proceedings of the joint Harvard-MIT symposium
on network royalty publishing.

Pubroy d7

page 3
93 . 9 . 14

forward materials to other service providers as needed to provide the service throughout the network.

In this contract the publisher also represents that he/she/it is the *rightful* publisher, and further agrees to be responsible for any disagreeable consequences under law or tort (violations of national security, privacy, copyright, etc.). These same understandings ordinarily hold in paper publishing, but are not made explicit.

Contract between customer and service provider. The service provider agrees to send materials on demand to the customer. The customer agrees with the service provider to pay for materials sent: both (1) royalties at rates specified by the publishers, and delivery fees to the service provider (as separately negotiated). The customer further agrees only to "fair use" of materials received: a copy for use, printed out if desired, and copies for backup, but no further distribution.

*Contract between author and publi*sher. This is assumed but not formally required. The author agrees to the sale of materials by the small fragment, and to the various consequences thereof.

Transclusion.

In our software (still under development, 2) we implement a special pointer which we call **transclusion**, a handy term for *virtual inclusion by reference across a document boundary.* A transclusion pointer from Document Y to a paragraph in Document Z means that the paragraph is logically and virtually a part of Document Y.

Special consequences of transclusion for quotation.

A problem of universal concern is the issue of copyright violation (from the point of view of publishers) or the restriction of freedom (from the

point of view of authors wishing to quote other documents). We believe our model nicely resolves the two motivational thrusts.

The transclusion pointer means that any author is free to quote any document already published under this system, since the publisher of the other document has already given contractual permission for sale by fragment. The quoted materials are thus purchased automatically by the reader from the original publisher at the time of delivery.

Conclusion.

There is little question that publishing with royalty on electronic networks will become a principal feature of the world of information. Sale only of whole documents is a frustrating practice with limited usefulness. Sale by user-specified fragment makes transclusion widely practical; and making both possible and fair to all parties many varieties of use which are currently frustrated within the system of copyright.

However, without contractual recognition of the varied possible ramifications, many parties may get into difficult situations.

Bibliography.

Nelson, Theodor Holm, *Literary Machines 93.1*. $25 prepaid ($40 foreign) from Mindful Press, 3020 Bridgeway #295, Sausalito CA 94965.

Xanadu Operating Company, "Xanadu Hypermedia Server Developer Documentation," July 1992. $150 prepaid ($200 foreign) from Mindful Press, 3020 Bridgeway #295, Sausalito CA 94965.